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ABSTRACT

This paper introduces, as a new, relevant, technique for use in institutional research and planning, the concept of paradigms as presented by J. A. Barker. The paper uses as examples of these concepts analysis of two major problems, frequently found in higher education and institutional research and planning. These examples illustrate how outsider innovations and the so-called "messing with the rules" activity can produce paradigm shifts that help solve problems and help create a vital future for the profession of institutional research. This outsider/insider problem solving concept is demonstrated through a pilot test that was designed to solicit and compare problem-solving ideas from graduate students, faculty, staff, and members from the business community. The two problems addressed concern: (1) the constraints that the tenure system places on program and curricular change; and (2) the lack of professional management training for faculty who become managers of major resources. The paper concludes with an analysis of the responses. Attachments include the memorandum sent to study participants and a review of J. A. Barker's book, "Future Edge: Discovering the New Paradigms of Success." Contains 14 references. (GLR)

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How to Use Barker's Paradigm Concepts to Help Solve Major Higher Education Problems and Help Create A Vital Future for Institutional Research and Planning

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Presented at the Annual Forum of
The Association for Institutional Research

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This paper was presented at the Thirty-Third Annual Forum of the Association for Institutional Research held at the Chicago Marriott Downtown, Chicago, Illinois, May 16-19, 1993. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Jean Endo
Chair and Editor
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How to Use Barker's Paradigm Concepts to Help Solve Major Higher Education Problems and Help Create A Vital Future for Institutional Research and Planning

ABSTRACT

The concepts of Joel A. Barker (Future Edge) about "paradigms"--rules of the way in which society, organizations, and professions work--can be used to strategically anticipate and shape the future of any field of endeavor, and solve difficult and impossible problems in the process. On the other hand, not understanding paradigms can lock a field or organization into obsolescence. The choice is yours to make. Major changes are not foreshadowed by trends, but result from changes in rules. Major problems of higher education and institutional research and planning are used to show how outsider innovations and "messing with the rules" could produce paradigm shifts that help solve problems and help create a vital future for the profession.

How to Use Barker's Paradigm Concepts to Help Solve Major Higher Education Problems and Help Create A Vital Future for Institutional Research and Planning

INTRODUCTION

Institutional research and planning practitioners seriously engaged in "management research, policy analysis, and planning" activities at colleges and universities tend to seek out and use a full repertoire of methods, tools, and techniques to accomplish their role and mission. New methods and techniques--properly understood and used--are or may be added to increase and enhance the professional capabilities of institutional research and planning offices and staff.

It is the main purpose of this paper to help introduce --as a new, relevant, technique for use in institutional research and planning-- the concept of "paradigms" as presented and explained by Barker [1] who has pioneered and used the concept for a number of years in advising organizations on how to deal with change and create leverage with the future.

BARKER'S PARADIGM CONCEPT(S)

Paradigm means "pattern, example, model," in this case, centering on how a person thinks, perceives, and behaves through seemingly subtle but enormously powerful--and limiting--paradigms of their specific field, profession, and circumstance. Thomas S. Kuhn, in The Structure of Scientific Revolutions, used the role of paradigms in scientific research to demonstrate how new discoveries and theories emerge --how they are accumulated and assimilated by men committed to an incompatible, older theory." (p. viii)

Barker recognized and gave credit to this use of paradigms by Kuhn, and went on to develop and tailor applications showing how professions, organizations, and society can strategically anticipate and shape the future of any field of endeavor, and solve difficult, impossible problems in the process, through understanding and active engagement of the paradigm effect.

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[1] Joel Arthur Barker, in Future Edge: Discovering the New Paradigms of Success. William Morrow and Company, 1992. Subsequently published in paperback under the title Paradigms: The Business of Discovering the Future. Harper Business, A Division of Harper Collins Publishers, 1993.

Barker defined paradigm as "a set of rules and regulations (written or unwritten) that does two things: (1) it establishes or defines boundaries; and (2) it tells you how to behave inside the boundaries in order to be successful."

He described success as "your ability to solve problems, problems from trivial to profound." Among the terms he presented which represent subsets of the paradigm concept are "principles, methodology, assumptions, mind-set, values, frames of reference, inhibitions, and doctrine."

Kuhn and Barker both suggest that people personalize and invest in a given, typically prevailing, community belief-perception-model (paradigm) and then become threatened by anything or anyone trying to change or dislodge it.

As background for my discussion relating and applying Barker's ideas and techniques to college and university planning and institutional research, following are selected highlights from Barker which may provide a synopsis of his paradigm concepts.

- Anticipation, innovation, and excellence (also called total quality management, or TQM) are all necessary keys to the future of any organization. (p. 11) Barker focused on anticipation and innovation.
- It is in the future where our greatest leverage is. (p. 18)
- Rule changes (paradigm changes) are not foreshadowed by trends. Instead, these rule changes create new trends or alter existing trends. (p. 25)
- "Influence understanding" --one (of five) components of strategic exploration-- is the "ability to be able to understand what influences your perceptions," especially of the future. (p. 29)
- Paradigms act as physiological filters through which we see the world. (p. 86) Thus, how one perceives a set of data will be dramatically affected and filtered by one's paradigm(s). This is the "paradigm effect." Because of it, you may be "quite literally unable to perceive data right before your very eyes, and may "listen but do not hear." (p. 87)
- Each paradigm develops a set of seemingly unsolvable problems which are solved by changing the paradigm. (pp. 51-52) Thus, new paradigms appear when someone solves

problems without using the existing (old) rules. [Barker described this with a graph showing phases of 'problems solved' (Y axis) over time (X axis). See especially pp. 43-51.]

- It will probably be an "outsider" (to the given field or organization) who will "mess with the rules" and change the paradigm --a young person fresh out of training; older person shifting fields; maverick; or tinkerer-- who has no investment in the prevailing paradigm (pp. 55-65)
- Paradigm "shifters" present an innovation which tends to be resisted because it does not fit the existing rules. (p. 92) Nevertheless, they uncover a new "pathway."
- Paradigm-shifting pathways are followed and developed by paradigm "pioneers," who gain great advantage and are able to pioneer because they know how to watch and listen early for the new paradigms. (p. 78) Pioneers understand and are able to see beyond the limitations of the paradigm effect. (p.84-87) They know to watch for and (really) listen "outside your field for people who are messing around with your rules." (p. 78)
- Paradigm pliancy --the purposeful seeking of new, innovative ways of doing things-- is the best managerial strategy in turbulent times, in terms of both managing paradigm enhancement (TQM) and leading into new paradigms (with intuitive judgment, risk assessment, and courage). (pp. 156-164)
- Looking forward in only one direction leads to a special kind of strategic blindness. One must learn to scan the horizon constantly to identify the important changes occurring on the sidelines, at the edges. (p. 209)

Barker's work and applications focused primarily on business and industry. (See also the attached book review on Future Edge for an additional description of that work.) *The remainder of this paper is devoted to applying paradigm concepts to higher education.*

SOME WAYS TO APPLY PARADIGM SHIFTING AND PIONEERING TO HIGHER EDUCATION

Within the context of the paradigm effect, colleges and universities have their share of difficult and seemingly impossible-to-solve problems. TQM, which Barker predicts will be the most important 20th century paradigm shift, serves to enhance existing paradigms. But what ways are

there of proactively going beyond existing paradigms and encouraging 'paradigm-shifting' problem solving and/or 'paradigm pioneering' detection and development of paradigm shifts?
Here are my generic answers:

- -

Paradigm shifting involves encouraging innovation and rule-changing within an institution, group of institutions, or field to solve crucial problems by changing (the) paradigm(s).

> This suggests using 'outsiders' --i.e., persons new to the field who are more likely to mess with rules and change the paradigm-- in addition to insiders, some of whom may have paradigm-shifting capabilities or potential, as in the case of mavericks or tinkerers, or perhaps of other types of individuals.

Paradigm Pioneering involves scanning within and without higher education to watch and listen for paradigm shifts that will or may solve crucial problems faced by colleges and universities.

> This suggests selective, yet extensive, reading and networking with an open, flexible, non-restrictive attitude which characterizes full or adequate understanding of the paradigm effect. Clearly, this means going far beyond cursory review of the Chronicle of Higher Education and into a combination of reading many publications and networking across fields --as appropriate to the specific problem(s) in need of solution. A key here is to attain, and apply in scanning, understanding of how to distinguish between trends, changes in rules (i.e., paradigm shifting), paradigm pioneering, and paradigm enhancement.

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Both of these options are available for use by the college and university manager, director, division head, and CEO. Either would require commitment and allocation of resources over time and earnest pursuit to get results. Just a few of the problems that might be addressed with these paradigm shifting and pioneering options are:

> Decreasing state funding and increasing tuition funding at public institutions. Educational quality and cost are closely connected to the funding issue and need to be considered in this overall equation of demand, access, and societal benefits.
>
> Management Capability. No standard criteria or mechanisms exist for evaluating (and improving, if recommended) the adequacy of an institution's management concepts, style, methods, techniques, services, and products.

Fixed Costs/Curriculum of Tenure. High ongoing "fixed" costs of tenured faculty and the associated inflexibility of a relatively fixed curriculum can be serious institutional constraints.

Accountability Reporting. Standard, comparable or reconcilable data definitions, analytical methods, and information technology do not exist to provide --across institutions and sectors-- accountability reports of efficiency, effectiveness, quality, and cost.

Employee Training. Faculty and staff "training" time, funding, and value as a resource activity and investment in the organization tend to be inadequate or non-existent, causing error, inefficiency, and unnecessary added costs.

EIS. The high cost of development, uncertainty of demand and usage, and definitional complexities of an "executive information system" (IS)--in the face of general interest in such a management tool--may eventually end in failure.

Data Management. Difficult challenges including outmoded data collection, accuracy, and integrity methods in institutional data management seem intractable and add unwanted costs and delays in required reporting.

The addition of paradigm shifting and pioneering concepts to environmental scanning and strategic planning practices would, I think, likely bear fruitful results. I highly recommend exploration and testing of these concepts for the institution or field in which people are serious about strategic management and proactive problem solving. Why? Because I see these concepts as:

- o an opportunity to lead rather than lag.
- o relatively low-cost in resources to implement.
- o an extremely compatible and strengthening process for bona fide strategic planning.

Paradigm-shifting efforts and innovations, i.e., the creation and/or detection of new rules to solve major problems, may carry --as in any 'research-and-development' project-- uncertainties about attaining specific results within a given timetable. But for the reasons stated, I see this as a small risk given the potential importance and benefits of the process.

PARADIGM SHIFTING -- A PILOT COMPARISON OF OUTSIDER AND INSIDER PROBLEM SOLVING IDEAS

To illustrate how "messing with the rules" can work, I conducted a modest pilot test to solicit and compare ideas from institutional outsiders and insiders. In an actual, institutionally organized and sponsored case, encouragement and development of paradigm-shifting innovations would involve

setting up an ongoing process, including the marshalling of selected 'outsider' kinds of persons, with the expectation that such persons might be more likely to solve a given problem by changing the paradigm. The ideal condition would be to bring problem solving individuals and groups into the organization, spend time on campus, discuss the problem(s), and allow adequate time for idea-incubating and brainstorming.

In lieu of an organized project, however, an investigative survey sought innovative solutions to selected major problems. Objectives of this test were to (a) illustrate differences in rule-changing, paradigm-shifting behavior; (b) point toward some solutions and possible important futures regarding the two problems; and (c) broadly hint at how paradigm thinking could work.

The test was done as follows.

Two selected problems were described, both of which have been rather widely stated [2]
--one on constraints that the tenure system places on program and curricular change; the other on lack of professional management training for faculty who become managers of major resources. Innovative solutions were requested, via the written survey instrument, from four systematically selected groups (n = 15 each).

Outsiders

Members of business community..... Outside tenure and academic management.

Graduate students.. Outside tenure; ties to academic management in terms of staff-to-faculty support and/or of close interaction with faculty.

Staff..... Outside tenure; ties to academic management in terms of staff-to-faculty support and/or of close interaction with faculty.

Insiders

Faculty..... Inside tenure and academic management.

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[2] For instance, the tenure problem is mentioned in Bowen and Schuster, Rosovsky, and others. The faculty manager problem is included in Keller, Bergquist, McDade, Creswell et al, and others.

No basis existed, for this kind of test, to attempt to categorize those respondents who would fit the Kuhn-Barker 'outsider' types --the younger, freshly trained; older field-shifters; mavericks; and tinkerers. There might be a rough corollary of the younger, freshly trained type with graduate students. Field-shifters, mavericks, and tinkerers might be found among business, staff, and faculty members. In an actual institutional project, it would appear possible to do some categorizing along these lines.

The survey instruments described the problems as simply and completely as reasonable in the format used, followed with a question asking for solutions. (See attached.) One problem was sent to each individual, so that half received the tenure problem and half the faculty-as-manager problem. This one-time, 'snapshot' approach, versus the ideal 'exposure over time' approach, was judged worthwhile in order to investigate potential evidence of differences in (a) more innovative thinking where there is little or no restraint by existing paradigms and (b) less innovative thinking where the paradigms are in-place. This approach would also offer a means of meeting the other objectives of pointing toward some solutions and show, in a simulated way, paradigm thinking (effect) at work.

Results of the Pilot Investigation

The overall response rate was 37% (22 out of 60), and ranged from 53% for faculty to 20% for graduate students, with no follow up. Response to the tenure problem and to the faculty-as-manager problem were each 37%.

Here is a summary, which resulted from the test survey, of the ideas and suggestions for solving these two problems . First, the tenure ideas are summarized, followed by the faculty manager ideas. Each summary starts with the problem statement taken from the survey instrument.

(**Statement of the T E N U R E Problem** from the survey instrument)

Faculty Tenure: Preserving Academic Freedom While Increasing Resource and Program Flexibility.

Academic Freedom. To allow for and preserve 'academic freedom' (the pursuit of truth and knowledge and the representation of many points of view) in instruction and research, some form of safeguard is essential. For many years this safeguard has been faculty 'tenure'--in effect, guaranteed employment until retirement, assuming adequate performance of duties. Without tenure, faculty could be ousted at will by political, religious, or interpersonal forces, resulting in rigid doctrine, devalued education for students, loss of intellectual continuity and truth, and disadvantage in global competition.

Fixed Resource Commitment and Inflexibility. Tenure tends to require substantial commitment of fixed costs to instructional programs, which are labor intensive, and significant constraints on program and curricular change, particularly where societal demands may coincide with rapid changes in fields. The tenure paradigm poses limits to institutional or departmental ability to provide needed change in a timely fashion. The technological impact on rapid increase and change in information/knowledge tends to heighten this need. Although normal faculty retirement and job change are typical ways to bring new faculty in, this tends to be a slow process, with the risk that 'locking in to the past and present' may bring some form of obsolescence to the institution's future. Some institutions gain partial flexibility by limiting the proportion of tenured faculty, and using fixed-period contracts for non-tenured faculty. But this does not solve the overall problem.

Question : How can the academic freedom principles which underlie tenure be preserved and, at the same time, changes be made in tenure resource commitments so that the necessary flexibility can be given to be and remain fully at the leading edge of curricular demand and change in the years ahead ??

OUTSIDERS -- BUSINESS COMMUNITY MEMBER IDEAS

Have deans and the Chancellor select academic department heads to avoid "good old boys" control of tenure and shift to more objective control of tenure.

Have a board review each tenured faculty member's tenure status (performance) every five years and either renew tenure or make it probationary until requalification --using specific conditions that retain protection from discrimination, personality, or political issues.

Significant tampering with the tenure system by a single university would be counter-productive, i.e., the best faculty would find a job elsewhere. However, tenure at an institution should be made more difficult to achieve (as in the Ivy League) and awarded to only a few outstanding faculty.

Offer tenure for a period of time (5-8 years), not for life as implied above, and review each faculty member's performance at the end of the period, i.e., each 5-8 year period. Establish measures for faculty performance that don't allow political, religious, and "other" forces to carry the decision. Measures of faculty performance should be as quantitative as possible, minimizing subjectivity, and should include steps taken by the faculty member during the (5-8 year) period to stay current with rapid changes in their particular field.

OUTSIDERS WITH TIES TO ACADEME -- GRADUATE STUDENT IDEAS

Require that senior, tenured faculty develop experience and expertise in the new technologies and fields of the day. By teaching old dogs new tricks, tenured faculty would be more able to meet demands of program, curricular, and technological.

Set up requirements for tenured faculty to meet currency in their field(s).

Bring in more 'visiting professors' in areas where change comes quickly--perhaps from industry.

Keep closer ties with industry and actively seek out ideas for cutting edge research areas...and encourage faculty to bring this experience into the classroom.

Remove the tenure system and replace it with a continuous evaluation process from undergraduate students on faculty teaching performance and from graduate students on faculty research performance. Objective criteria would be needed to eliminate 'grudge matches.'

OUTSIDERS WITH TIES TO ACADEME -- STAFF IDEAS

Continue to preserve academic freedom with tenure, but require that the tenured faculty member demonstrate currency and creativity in their professional lives and contribute to the academic life of the campus, nation, and world. There should also be more limiting of the number of tenured positions. At the point where tenured faculty stop contributing to (one or more of) education, research, and public service, their tenure should be terminated. Measurements should be developed that gauge the level of contribution, and tenure should be reviewed against these measurements periodically to verify the academic vitality of the faculty members. (Suggested measures are: that faculty members be open to understanding new ideas, and present them to students; investigate new schools of thought in their research; and provide public service that utilizes skills for which the faculty member is employed at the university.

INSIDERS -- FACULTY IDEAS

If tenure is eliminated, and I think there is some argument for this, the establishing of rigid principles for dismissal is essential.

A combination system of tenure and contracts might work. The tenure system should not be one of "up or out" mentality. One could go for tenure at any time and any number of times if the department so recommended. One denied tenure would not be forced to leave but would continue on contract.

A better, more far-reaching central plan that projects the number of tenured positions the university can provide for, and that's it. No new slots until transitions occur, and then to departments which make the best arguments.

Operate as any other business, where you are hired to do a specific job and you remain with the "company" as long as you are productive at your job. The university must also be ready to do substantial re-training as time goes on.

Adopt state or federally mandated job protection where it is very difficult to get a person removed. It should be a more positive than negative culture, though.

The issue is not really tenure; it's incompetence. The faculty needs to define what incompetence means and then develop mechanisms to demonstrate it and remove those who are incompetent by due process procedures.

There needs to be a way to reduce salaries for people who cease to perform.

Retirement benefits should be paid only until age 65, thus taking away long-term benefits of continuing to work (past normal retirement).

Our institution cannot lead on the matter of tenure. We could, however, give people 15 or 30 year contracts with 5 year renewals thereafter. These contracts would guarantee freedom of expression explicitly, but would have a final year unless renewed.

Accumulate a number (say, 25) of faculty positions to be allocated from the Chancellor's office to meet transitory (3-5 years) needs of particular departments and schools/colleges. These would be non-tenure positions with control and salaries determined by the Chancellor.

An early retirement program with strong financial incentives and high visibility should be instituted. Steps should be taken to educate faculty about the benefits to the individual and the university.

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Before I offer my suggestions about tenure, I have two observations. The first is the critical importance of having recently trained Ph.D.s on the University's faculty. These individuals embody state-of-the-art training and fresh, new ideas that are essential to both our teaching and research functions of the University. Second, the institution of tenure tends to "crowd out" these individuals. In too many instances, universities make "mistakes" in forecasting the long-term productivity of faculty with the consequence that it becomes extremely difficult to upgrade the quality of the faculty.

Could universities consider the following type of system? Rather than granting a lifetime contract at the time of tenure review, grant a contract that would carry an individual through 20 (or 25) years of service. Then during something like the 15th year of service have another review that would provide a 10 (or 15)-year extension. This type of system would cover the typical working life of a professor (30 or 35 years), giving job security for a reasonably long career, but also providing some flexibility to the university.

Job security (tenure) is worth something. If it is not provided in its current form or a similar form, additional compensation would presumably be required. Economists have long used what are called "hedonic" models to measure the value of items that are not traded in the market place and thus not subject to direct measurement in terms of value. I have not seen such a study, but it would be possible to measure the value placed on tenure. Such a study would be extremely interesting to many of us in academia, as well as others.

A new and different tenure system could probably not be implemented by a single institution without serious negative consequences for recruiting and much more.

Comparison of Ideas and Suggestions

A synopsis of the basic ideas and suggestions on tenure, and comparison of these among the four groups, is provided in Matrix A below.

MATRIX A --- TENURE

Synopsis of Idea/Suggestion:	Outsiders	Outsiders with Ties to Academe		Insiders
	Business	Grad. Stu.	Staff	Faculty
(no. of respondents)	(3)	(2)	(1)	(5)
Review faculty member's tenure (performance) every (c. 5-15) years and require renewal; include specific competence measures.	XX			XX
A single institution cannot implement tenure changes; it would be counter productive and faculty would go to other institutions.	X			XX
Make tenure more difficult to achieve (Ivy model); limit the number of tenure positions.	X		X	X
Require that senior faculty develop new experience and expertise, and meet currency in their field.		XX	X	
Deans and Chancellor should select chairs.	X			
Bring in more visiting professors in areas of rapid change --possibly from industry.		X		
Keep closer ties with industry and seek cutting edge research ideas.		X		
Replace tenure with a continuous evaluation process, w/undergraduates evaluating teaching performance and grad students research performance.		X		
Replace tenure with a combination of multi-year contracts and renewals.				XXX
Adopt state or federally mandated job protection.				X
Reduce salaries for those who cease to perform; stop paying retirement benefits at age 65.				X
Accumulate a pool of non-tenured faculty positions to meet transitory and rapid change areas of need.				X
Have a visible early retirement program.				X
Put economic value on tenure.				X

(**Statement of the FACULTY AS MANAGERS Problem** from the survey instrument)

Faculty As Managers: Drawing Upon Faculty to Manage While Increasing Their Professional Management Abilities.

Faculty Become Managers. College and university CEOs, 'academic' executive managers, and department heads typically come from the faculty ranks, appointed to a management role from within their campus or from another campus. They understand the academic and research setting and are accepted by other faculty as bona fide colleagues. Managerial salaries offer an incentive to go into management. The individual may return to his/her tenured faculty position should he/she decide to stop managing. The move to and from the professorate and management seems demanding yet risk-free.

Lack of Professional Management Training. Faculty as managers tend not to have professional management training. Neither time nor resources exist for substantive, grounded training. Managers acquire their own on-the-job training -- perhaps with minimal mentoring-- as they progress to academic department head, executive-level division, or institution-wide management role. Some do well, and seem to have natural management ability. Some may devote effort, on their own, to learning management techniques. Some, however, may find that strong managerial training would help them become better able to manage resources--effectively, decisively, and professionally. In the present administrative paradigm, few management-based principles or methods seem to be used to evaluate management expertise and skill. Performance tends to be reviewed by the superior academic manager.

Question : How can academic managers be brought into management positions in a way that provides or sustains collegial acceptance by the faculty and, at the same time --during a period of severely tightened and limited resources-- requires or encourages professional management training ??

OUTSIDERS -- BUSINESS COMMUNITY MEMBER IDEAS

Use of a Management Candidate Assessment Process (MCAP) would be a good way to start to identify potential managers and let management candidates know the areas they need to strengthen to become effective managers. All candidate assessments would be done by volunteer managers with proven track records.

Assign a mentor for new managers. This could be from either within the university, with another university via electronic interchange, or with local industry and alumni (with proven management skills).

Work with local companies to get "seats" in their internal management training classes. Many local companies run management training programs. If companies could get a contribution (tax incentive) for providing training to university management, it seems reasonable that these classes could be provided, on a space available basis, at no or very little cost.

THERE IS NO REWARD FOR NO EFFORT. Candidates and managers must spend time and effort to improve their skills. Establishing a culture that continuous improvement applies not only to improving teaching and academic skills but also to improving management skills is very important.

I believe that the academic situation is much the same as in industry: people may be highly skilled in a functional area or discipline and get promoted on that basis ---but make lousy managers because the skill sets are totally different. The 'Peter Principle' at work. Some ideas:

Promote faculty to management based on leadership/management aptitude and skills, not academic excellence.

Provide leadership training free of charge (to the faculty member). Treat it as an investment--leaders are both born and made. This training could be provided to academics who want to go into management as well as those already there.

Provide an alternative career path on the academic side (maybe this is already true), with equivalent salary and prestige to the management path. This would discourage academics with poor leadership skills from going into management just for the financial rewards. Not everyone is cut out to be a leader.

An obvious solution is a trend to eliminate 'layers' of management. Current (participative and quality) management techniques seem to bring employees into decision-making, less resentment should exist as to whom gets selected to manage. Also, resentment could also be reduced if outsiders made the selections.

Another thought to weed out poor managers is a prolonged training and trial period, but this could be costly. But poor management can be much more costly. It is my experience that you can be so confident that you have selected the right person, and yet be so wrong. Trial and training periods reduce these errors.

OUTSIDERS WITH TIES TO ACADEME -- GRADUATE STUDENT IDEAS

A radical re-engineering of the academic incentive system is needed to encourage academic managers to develop administrative skills and for faculty to appreciate and cooperate with administrators to better the university. Several key ingredients, lacking from the present system, are: (1) There are few real rewards for good management. (2) There is no penalty for bad managerial practices. (3) There is a great overemphasis on individual accomplishments in the existing incentive system for faculty members.

Establish systems whereby well managed departments would be rewarded (perhaps with lower overhead rates or more teaching and research assistants) and poorly managed departments penalized. The criteria for evaluating departmental management should be similar to those used in private industry: How well is the budget managed? How productive are faculty members (measured collectively, on the basis of teaching and research)? How is faculty morale? These systems would form a sort of "profit sharing" incentive program that would encourage managerial responsibility, promote development of 'people skills' in department chairs (including taking skill-building coursework), while bringing peer pressure to bear on faculty who are not supportive of the department's goals.

The tenure system is the root cause of overemphasis on individual accomplishments in academia. If faculty members take actions detrimental to their department but beneficial themselves, they are rewarded. Once trained in the tenure process, this "me first" attitude is difficult to unlearn. Better definition of departmental goals and how each faculty member is expected to further these goals is needed.

OUTSIDERS WITH TIES TO ACADEME -- STAFF IDEAS

Establish mentoring programs. Identify successful academic managers. Provide educational programs that reveal the ways these successful faculty made the transition to management. Consider involving academic managers from other institutions, to provide a broader vision.

Develop cooperative programs with academic departments. Identify departments that are interested in this topic --College of Business, Departments of Higher Education, Public Policy, and so on. Utilize their expertise to develop resource guides, bibliographies, and program ideas.

Provide a handbook of development activities. Develop a handbook that addresses key policy and procedure issues. Reference appropriate personnel, departments, or other policy manuals. Perhaps include development activities for core management tasks. Successful completion of these tasks could be required as part of a performance evaluation.

Invite key national leaders to assist with leadership training (such as Terry Deal, George Keller, James Baldridge, Michael Cohen, Ernest Boyer, James March, Ernest Lynton, Sandra Elman, Derek Bok, Daniel Alpert, Patricia Cross Donald Schon, and Karl Weick.

Short, intensive, "executive" management training programs would help. The lack of management training is showing at many universities. Management training of almost any sort would be cost effective. A trained executive, dean, or department head would be more likely to effectively manage financial resources and retain effective faculty and staff. Since managing faculty (tenure and promotion issues...) differs from managing a typical (staff) employee, training for higher education management could be developed by an institution or professional organization. Lack of training is more important, and apparent, now as resources tighten.

Use faculty from the Business College to teach management and organization classes for faculty managers. Reward them with release time. Let faculty-in-training shadow Business faculty as they do training or consulting on or off campus. Pair Business faculty with faculty-in-training for mentoring. Let ideas go in both directions.

Use Employee Development staff and ED training programs already in place. Make use of videos and small group discussion.

Build small leaderless groups of faculty managers who will read literature on management, discuss it, learn together, and build a support network across departments.

Academic managers need skills in conflict resolution, project management, and budget management.

I believe the resources exist on campus to do training in these areas. Managers need to see the importance of this training.

Faculty appointed to managerial positions need to be committed to Total Quality Management (TQM). In addition, TQM methods could be used to identify how both staff and faculty can be more productive.

There needs to be more awareness on the part of all managers, including faculty, as to how taxpayers, business community, minority, and small businesses perceive the University. I believe greater awareness and involvement between university managers and the outside community would help this community have a better understanding and higher opinion of the university.

Faculty managers need to understand that certain rules and regulations must be complied with and why.

I feel that faculty managers have a great opportunity to bring the staff and faculty closer together and could offer suggestions for changes to do so. Also, a visit to service departments to see how they operate and why could improve both areas' understanding.

INSIDERS -- FACULTY IDEAS

In my view, the greatest problems exist at the lowest level of management, that of departmental chair. Chairs are often not selected on the basis of their vision, leadership qualities, or articulated goals, but rather as a result of default or a "it's your turn" system. I suggest a new system that would work as follows. A given department would nominate by its own process one to three persons that it would support as chair. The Dean would then interview these nominees and select the one who shows some administrative ability and who has some goals for his/her department. The system would more closely follow procedures used at higher levels of administration.

New chairs would be required to have some administrative experience. Faculty should not be brought into positions as chairs until they have had some successful and productive, significant committee experience in their departments. Deans should monitor this.

There needs to be a real incentive attached to lower level administrative positions. One should clearly make more money as chair than as a regular faculty member. In addition, some real authority should be invested in the position. Persons interested only in the financial incentive would not be selected. The real reasons for wanting to be chair would be ferreted out by the Dean during the interview process. If there is an incentive, and the person selected is truly interested in the challenges of the job, he/she will work at being a good manager and perhaps even spend some time studying management approaches.

Deans need to more closely evaluate the chairs. Each year, each chair should discuss departmental goals and aspirations with the Dean. At the end of the year, the extent to which these goals have been met should be examined. This is a management by objective approach, but it must be developed in such a way as to not be overly formal or "bean counting" in nature.

A major effort should be made to simplify the operations of the University. When faculty move into administrative posts there should be seminars to acquaint faculty/administrators with the obligations and operations of the new office. The present system works pretty well --it is self-selecting. No one is forced to be an administrator. People can leave and return to academic work or they can move up. But they won't likely move up unless they have done reasonably well. The system is like an apprenticeship--people learn by doing. Those that do well, do well.

Mentoring; workshops; small group meetings of people doing the same job from around the region.

Comparison of Ideas and Suggestions

A synopsis of the basic ideas and suggestions on faculty as managers, and comparison of these among the four groups, is provided in Matrix B below.

MATRIX B --- FACULTY AS MANAGERS

Synopsis of Idea/Suggestion: (no. of respondents)	Outsiders Business (3)	Outsiders with Ties to Academe Grad. Stu. (1)	Staff (4)	Insiders Faculty (3)
Establish methods of identifying management candidates with good managerial potential; promote faculty to management based on aptitude/skill, not academic excellence.	XX		X	X
Assign mentors to new managers.	X		X	X
Arrange for training: such as attendance at mgt. training programs at local businesses, by Coll. of Business faculty, or existing employee development programs and videos.	X		XXX	
Provide management training with no charge to faculty member. Treat this as an investment.	X		XX	
Consider involving academic managers from other institutions, regions, departments to provide broader view.			XX	X
Provide (handbook or other method of) developmental activities that explains policies and procedures; require successful completion.			XX	X
Reward management effort with financial and authoritative incentives (for chairs); establish culture that encourages continuous management improvement.	X			X
Provide alternate mgt. career path for faculty and discourage academics w/poor leadership skills from going into mgt. just for financial reasons.	X			
Eliminate layers of management; bring more employees into participative decision making; have outsiders select the managers.	X			
Provide prolonged training and trial period.	X			
Radically re-engineer academic incentive system so that well-managed depts. are rewarded, and poorly-managed depts. are penalized.		X		

Have academic managers become committed to TQM.	XX	
Increase awareness on part of managers of how the public perceives the university.	XX	
Have deans select chairs, from dept. nominations, based on interviews to assess mgt. capability and potential.		X
Simplify university operating procedures.		X

Interpretation of Results

Results, in terms of the objectives set forth, were interpreted as follows;

1. TO ILLUSTRATE COMPARATIVE OUTSIDER-INSIDER DIFFERENCES IN RULE-CHANGING, PARADIGM-SHIFTING BEHAVIOR.

Review of matrices A and B --comparing similarities and differences among the four groups in their ideas and suggestions-- seemed to indicate, on the basis on what I judged to be more radical ideas, particularly those coming from only one group, that some rule-messing ideas came from those outside the tenure and faculty manager systems, and some came from inside.

On the tenure problem, five of the sixteen ideas seemed more innovative in nature, and the rest appeared more 'logical,' perhaps, within the existing tenure paradigm. The five, with the suggesting group category in parentheses, were:

(outsiders -- grad students and staff) require that senior faculty develop new expertise and meet currency in their field.

(outsiders -- grad students) replace tenure with a continuous evaluation process, with undergraduates evaluating teaching and grad students evaluating research.

(insiders -- faculty) adopt state or federally mandated job protection.

(insiders -- faculty) reduce salaries for those who cease to perform; stop paying retirement benefits at age 65.

(insiders -- faculty) put economic value on tenure.

In this example, it could be suggested that some of the more innovative ideas came from respondents outside the tenure system (i.e., grad students and staff), and some came from inside (faculty).

On the faculty manager problem, only two of fifteen ideas seemed more innovative. They were:

(outsiders -- business) provide an alternate management career path for faculty.

(outsiders -- grad students) radically re-engineer the academic incentive system so that well managed departments are rewarded and poorly managed ones are penalized.

In this example, it could be suggested that the more innovative ideas came from respondents outside the faculty manager system.

2. TO POINT TOWARD SOME SOLUTIONS AND POSSIBLE FUTURES REGARDING THE TWO PROBLEMS.

I would say that the extent and range of ideas offered from this small sample points to some potential solutions to these two problems, given further study and development. Detailed responses and comments in the summary show a depth of interest and a range of problem solving abilities.

3. TO BROADLY HINT AT HOW PARADIGM THINKING COULD WORK.

It would be my opinion that the range of solutions suggested by 22 individuals responding to a written survey does demonstrate how paradigm thinking works, by (a) the fact that two-thirds of the ideas were offered by only one group, and only one-third were offered among two or more groups, and (b) by the interpretation of objective 1.

CONCLUSION

This investigation was, in the judgment of the author, successful in meeting the objectives of the survey. At the same time, as implied herein, the survey approach only touched the surface of the power and potential of how paradigm concepts can be very useful in institutional research and planning, and in other functional areas of colleges and universities.

By using and applying the paradigm concepts and methods--both paradigm-shifting and paradigm pioneering--you can understand them and benefit from them.

By not understanding paradigms, you can lock yourself into obsolescence. Paradigms can provide "extraordinary leverage in shaping your future." Understanding paradigms can optimize your strategic exploration, help you communicate with others holding different paradigms, and help guarantee that you and your organization will be part of the new paradigms.

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BOOKS

TAKE ADVANTAGE OF *FUTURE EDGE*

Mark Meredith, University of Colorado, Boulder

Looking forward in only one direction leads to a special kind of strategic blindness. One must scan the horizon constantly to identify the important changes occurring on the sidelines, at the edges. Joel Arthur Barker

Want to gain "extraordinary leverage in shaping your future"? Read *Future Edge: Discovering the New Paradigms of Success* by Joel Barker (Morrow and Co., 1992, 240 pp.). While there is no such thing as a crystal ball, the closest thing to it for discovering your future and the future of your organization is the breakthrough paradigm concept skillfully presented in this work by Barker, who is arguably the leader in popularizing, with all that that entails, Thomas Kuhn's concept of paradigm. Barker has been talking to corporate audiences about paradigms since 1974.

Unlike *The Structure of Scientific Revolutions*, *Future Edge* is about innovation and anticipation. It is also about communication, how the mind works, scanning resources, TQM, trends, opportunity, management and leadership—all revolving around the concept of the paradigm.

"*Future Edge* is about innovation and anticipation."

To Barker, a paradigm is "a set of rules and regulations (written and unwritten) that does two things: (1) it establishes or defines boundaries; and (2) it tells you how to behave inside the boundaries in order to be successful." A paradigm shift involves a change to a new set of rules, a new game.

Paradigms are continually shifting in society, becoming outdated and replaced by new ones, some gradually and some not so gradually. Fundamental, major changes in society—such as environmentalism, deregulation, civil rights, and emergence of information as a key resource—may not be foreshadowed by trends. Instead, "these kinds of [paradigm] changes in the rules create new trends or dramatically alter trends already in place." By understanding how paradigms work, you can optimize strategic exploration. You anticipate the future by "watching for people messing with the rules. This is the earliest sign of significant change." If you do not understand paradigms, you are likely to become trapped into "seeing the world in only one way." You will be unable to communicate clearly in the language of those who hold different paradigms than yours.

There is a great deal of usefulness and applicability of Barker's paradigm concepts and methods to college and university environmental scanning and strategic planning. For example, Barker advises us to write down the major problems that everyone wants solved but feel are not readily solvable, and then (a) proceed to seek possible solutions which challenge the old rules and which may lead to paradigm shifts; (b) watch for paradigm shifts taking place elsewhere; and (c) in either case, be ready to pioneer the shift and develop and enhance it to solve the problem(s). A few such problems facing higher education are as follows:

- Accommodating the changing demographic composition of students and the increase in ongoing adult education demands;
- Reducing the high proportion of fixed costs and fixed curriculum of tenured faculty;
- Funding increased capital costs and the major backlog of deferred maintenance;
- Increasing or otherwise compensating for declining state and federal financial support;
- Reversing the decline in academic productivity;
- Recruiting quality faculty.

By adopting paradigm "pliancy" and engaging in "future edge" approaches to doing business, educational leaders could create a tolerance for strategic exploration that could dramatically change the managerial and communication climate. A few possibilities of the resulting benefits would be:

- Breaking down the typical barriers between college and university sectors, their constituencies, legislative bodies, and others;
- Getting better alignment and synthesis of academic and non-academic kinds of management;
- Establishing a more innovative and future-focused attitude among faculty, staff, and students;
- Improving overall management methods and understandings.

I leave you with one quote from Barker: "To be able to shape your future, you have to be ready and able to change your paradigms."

Mark Meredith is Director of Management Information Exchange and Analysis at the University of Colorado, Boulder.

BEST COPY AVAILABLE

University of Colorado at Boulder
Management Information Exchange and Analysis

206 Regent Administrative Center
Campus Box 15
Boulder, Colorado 80309-0015
(303) 492-8532

MEMORANDUM

To: _____

From: Mark Meredith

Subj: Your Suggested Solution(s) to A Higher Education Problem

America's colleges and universities are faced with tighter resources, and with the need to better manage available resources.

As an interested or associated member of a university, your ideas are sought on possible solutions to a somewhat 'entrenched' problem involving the management of resources, namely, the need to preserve academic freedom while at the same time explore ways to alleviate constraints which faculty tenure may place upon the use of available resources and upon flexibility to meet societal demands for program and curriculum change.

You are a select part of a pilot study to generate comparative proposed solutions to this problem from both internal (faculty and staff) and external (business, citizen, student) sources. This is an 'institutional research' and not a University study, and I hope that you will participate.

I am asking that you simply read the enclosed problem statement, jot down ideas that come to mind that might solve or help lead to solution of the problem, and return it to me in the enclosed envelope.

You are encouraged to consider creative, innovative solutions. Responses will be treated anonymously, so please feel free to be candid.

If possible, please return your ideas and suggestions on or before _____.

Thanks very much.

Enc.

POSSIBLE SOLUTION(S) TO A PROBLEM AFFECTING COLLEGES & UNIVERSITIES

Faculty Tenure: Preserving Academic Freedom While Increasing Resource and Program Flexibility

Instructions: Please read the following problem statement and then jot down solutions that come to mind. Your thoughts and ideas that might help solve or lead toward innovative solution(s) would be appreciated. Responses are anonymous, so please feel free to be candid. Then, simply return this in the attached envelope. Thanks very much.

Academic Freedom. To allow for and preserve 'academic freedom' (the pursuit of truth and knowledge and the representation of many points of view) in instruction and research, some form of safeguard is essential. For many years this safeguard has been faculty 'tenure'--in effect, guaranteed employment until retirement, assuming adequate performance of duties. Without tenure, faculty could be ousted at will by political, religious, or interpersonal forces, resulting in rigid doctrine, devalued education for students, loss of intellectual continuity and truth, and disadvantage in global competition.

Fixed Resource Commitment and Inflexibility. Tenure tends to require substantial commitment of fixed costs to instructional programs, which are labor intensive, and significant constraints on program and curricular change, particularly where societal demands may coincide with rapid changes in fields. The tenure paradigm poses limits to institutional or departmental ability to provide needed change in a timely fashion. The technological impact on rapid increase and change in information/knowledge tends to heighten this need. Although normal faculty retirement and job change are typical ways to bring new faculty in, this tends to be a slow process, with the risk that 'locking in to the past and present' may bring some form of obsolescence to the institution's future. Some institutions gain partial flexibility by limiting the proportion of tenured faculty, and using fixed-period contracts for non-tenured faculty. But this does not solve the overall problem.

Question: **How can the academic freedom principles which underlie tenure be preserved and, at the same time, changes be made in tenure resource commitments so that the necessary flexibility can be given to be and remain fully at the leading edge of curricular demand and change in the years ahead ??**

(Please write in your suggestions and ideas here.)

Questions? Phone Mark Meredith at 492-8632. If you need more space, please use the other side. Thanks.

Please return this, using the enclosed envelope to.....
Management Information Exchange & Analysis, University of Colorado, Campus Box 15, Boulder, CO 80309-0015.

University of Colorado at Boulder
Management Information Exchange and Analysis

206 Regent Administrative Center
Campus Box 15
Boulder, Colorado 80309-0015
(303) 492-6032

MEMORANDUM

To: _____

From: Mark Meredith

Subj: Your Suggested Solution(s) to A Higher Education Problem

America's colleges and universities are faced with tighter resources, and with the need to better manage available resources.

As an interested citizen and member of the business community, your ideas are sought on possible solutions to a somewhat 'entrenched' problem involving the management of resources, namely, the need to continue to draw 'managers' from faculty members while at the same time explore ways, as desired and appropriate, to provide these managers with greater professional management training, to enhance their ability to use available resources in achieving the institution's missions.

You are a select part of a pilot study to generate comparative proposed solutions to this problem from both internal (faculty and staff) and external (business, citizen, student) sources. This is an 'institutional research' and not a University study, and I hope that you will participate.

I am asking that you simply read the enclosed problem statement, jot down ideas that come to mind that might solve or help lead to solution of the problem, and return it to me in the enclosed stamped envelope.

You are encouraged to consider creative, innovative solutions. Responses will be treated anonymously, so please feel free to be candid.

If possible, please return your ideas and suggestions on or before _____.

Thanks very much.

Enc.

POSSIBLE SOLUTION(S) TO A PROBLEM AFFECTING COLLEGES & UNIVERSITIES

Faculty As Managers: Drawing Upon Faculty to Manage While Increasing Their Professional Management Abilities.

Instructions: Please read the following problem statement and then jot down solutions that come to mind. Your thoughts and ideas that might help solve or lead toward innovative solution(s) would be appreciated. Responses are anonymous, so please feel free to be candid. Then, simply return this in the attached envelope. Thanks very much.

Faculty Become Managers. College and university CEOs, 'academic' executive managers, and department heads typically come from the faculty ranks, appointed to a management role from within their campus or from another campus. They understand the academic and research setting and are accepted by other faculty as bona fide colleagues. Managerial salaries offer an incentive to go into management. The individual may return to his/her tenured faculty position should he/she decide to stop managing. The move to and from the professoriate and management seems demanding yet risk-free.

Lack of Professional Management Training. Faculty as managers tend not to have professional management training. Neither time nor resources exist for substantive, grounded training. Managers acquire their own on-the-job training -- perhaps with minimal mentoring-- as they progress to academic department head, executive-level division, or institution-wide management role. Some do well, and seem to have natural management ability. Some may devote effort, on their own, to learning management techniques. Some, however, may find that strong managerial training would help them become better able to manage resources--effectively, decisively, and professionally. In the present administrative paradigm, few management-based principles or methods seem to be used to evaluate management expertise and skill. Performance tends to be reviewed by the superior academic manager.

Question : **How can academic managers be brought into management positions in a way that provides or sustains collegial acceptance by the faculty and, at the same time --during a period of severely tightened and limited resources-- requires or encourages professional management training ??**

(Please write in your suggestions and ideas here.)

Questions? Phone Mark Meredith at 492-8632. If you need more space, please use the other side. Thanks.

Please return this, using the enclosed envelope to.....
Management Information Exchange & Analysis, University of Colorado, Campus Box 15, Boulder, CO 80309-0015.